



IN THE UNITED STATES PATENT AND TRADEMARK
OFFICE BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Appl. No. : 09/873,564
Appellant(s) : VAN DOMMELEN, Mark J., et al.
Filed : 4 April 2001
Title : HIGH-PRESSURE DISCHARGE LAMP
TC/A.U. : 2841
Examiner : LEVI, Dameon E.
Atty. Docket : BE 000011

APPELLANT'S CORRECTED APPEAL BRIEF

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

BRIEF OF APPELLANT

This Brief of Appellant follows a Notice of Appeal, dated 26 January 2005, appealing the decision dated 15 November 2004, of the Examiner finally rejecting claims 1, 3 and 4 of the application. All requisite fees set forth in 37 CFR 1.17(c) for this Brief are hereby authorized to be charged to Deposit Account No. 14-1270.

REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee of all rights in and to the subject application, Koninklijke Philips Electronics, N.V. of The Netherlands.

RELATED APPEALS AND INTERFERENCES

The Board's Decision in Appellant(s)' prior appeal in this case, Application no. 09/873,564, Appeal No. 2004-0699, mailed March 15, 2004 may be considered related to this Appeal. To the best of the knowledge of the undersigned, no other appeals or interferences are known to Appellants, Appellants' legal representatives, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Of the original claims 1-3, claims 1 and 3 were amended, claim 2 was cancelled, and a final rejection of claims 1 and 3 was reversed by the Board of Patent Appeals and Interferences by a decision dated 15 March 2004.

Prosecution was then reopened and claim 4 was added. Claims 1, 3 and 4 now stand finally rejected as set forth in the final Office Action dated 15 November 2004, and are the subject of this appeal.

STATUS OF AMENDMENTS

No amendments were offered subsequent to the final Office action. All amendments have been entered.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The invention relates to a high-pressure discharge lamp (L) comprising a discharge vessel (3) which is enveloped with clearance (10) by an outer bulb (1) provided with a lamp cap (2), which outer bulb (1) is translucent. Page 1, lines 1-3.

A lamp of this type is commonly known and finds wide application, for example, in public lighting. The outer bulb of the known lamp is shaped, for example, like an ovoid or paraboloid of revolution. The outer bulb may be provided at an end portion with a dimple or a dome to support the discharge vessel. Page 1, lines 6-10.

A drawback of the known lamp is that it is comparatively voluminous, which adversely affects the light-focusing possibilities. Page 1, lines 11-13.

In accordance with the invention, a lamp (L) of the type mentioned is characterized by the outer bulb (1) being substantially tubular in shape and being provided with a light-scattering layer. Page 1, lines 14-19 and 25; claim 1.

It has been found that a substantially tubular outer bulb (1) not only leads to a smaller volume of the lamp (L) but also to a higher light output of the lamp (L) in a luminaire that is suitable for the known lamp, without the beam distribution being adversely affected. As a result, the lamp in accordance

with the invention can very suitably replace the known lamp.

Page 1, lines 20-24.

The light-scattering layer (30) has the advantage that the strength of the outer bulb (1) is not adversely affected, as is the case when a surface of the outer bulb itself is rendered diffusely scattering, for example, by means of sandblasting.

Page 1, lines 25-28.

It is particularly suitable if the light-scattering layer (30) is in the form of an electrostatic coating. Such an electrostatic coating is comparatively simple to produce in industrial-scale batch production processes. Page 1, line 28 through page 2, line 2; claim 3.

In an illustrative embodiment, the electrostatic coating is internally provided on the outer bulb. Page 2, lines 31, 32; claim 4.

GROUND(S) OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal are:

1. Are claims 1 and 3 unpatentable over Verschueren (U. S. Patent Number 5,612,585) in view of Whitman et al. (U. S. Patent Number 5,723,937) (herein 'Whitman')?

2. Is claim 3 unpatentable over Verschueren in view of Whitman and further in view of Kinczel et al. (U. S. Patent Number 5,004,948) (herein 'Kinczel') and Thornton (U. S. Patent Number 4,315,193)?

3. Is claim 4 unpatentable over Verschueren in view of Whitman and further in view of Carleton (U.S. patent 5,008,583)?

ARGUMENT

1. Are claims 1 and 3 unpatentable over Verschueren in view of Whitman et al.?

Claims 1 and 3 are rejected under 35 USC 103(a) as being unpatentable over Verschueren in view of Whitman.

Verschueren discloses a high-pressure discharge lamp with a heat shield for influencing the heat balance of the discharge tube. See col. 1, lines 14, 15. The invention lies in the construction of the heat shield, which results in a reduction of the spread of the cold spot temperature. See col. 1, lines 51-59. The outer tube of the lamp shown in Fig. 1 to illustrate the invention happens to have a tubular shape. However, there is no teaching or suggestion that the particular shape of the outer bulb has any particular advantage for the invention or otherwise. Moreover, Verschueren does not teach or suggest the application of any coatings of any type to the surface of the outer bulb.

Whitman discloses incandescent lamps with a light-scattering coating. Fig. 1(a) shows an incandescent lamp 10 having a tubular quartz envelope 12 with a filament 14 sealed therein. The outer surface 22 is coated with a light-scattering coating 26.

Whitman's lamp 10 is incandescent, so it is not surrounded by an outer bulb in the manner of high-pressure discharge lamps such as those of Appellant and Verschueren. Thus, Whitman's light-scattering coating 26 is not located on an outer bulb, but directly on the outer surface of lamp 10.

Other structures shown by Whitman, in Figs. 2(a), 2(b), 2(c) and 3, all show incandescent lamps mounted within

parabolic reflectors (48,72). In Figs. 2(a), 2(b) and 2(c), light-scattering layers are provided in combination with light-reflecting interference filters on the walls of the parabolic reflectors. In Fig. 3, the opening of the parabolic reflector is covered with a lens having an exterior light-scattering coating.

There is no teaching or suggestion by Whitman of a high-pressure discharge lamp with an outer envelope, and the skilled artisan would not be led to apply teachings regarding lamps and structures of very different types to a high-pressure discharge lamp.

The Examiner states that it would have been obvious in view of the teachings of Whitman to provide a light-scattering layer on the outer bulb of Verschueren for the purpose of diffusing the light source image, as taught by Whitman (col. 2, lines 5-10).

However, since Whitman's coatings are applied to parabolic reflectors and lenses for incandescent lamps, and since Whitman does not suggest the desirability of applying such coatings to other lamp types or structures, it would not be obvious in view of Whitman to add coatings to the outer bulb of Verschueren's lamp.

Accordingly, it is urged that the rejection is in error and should be reversed.

Argument with respect to claim 3

Neither Verschueren nor Whitman contain any teachings or suggestions regarding electrostatic coatings. Accordingly, it would not be obvious in view of Whitman to add an electrostatic coating to the outer bulb of Verschueren's lamp.

Accordingly, it is urged that the rejection is in error and should be reversed.

2. Is claim 3 unpatentable over Verschueren in view of Whitman and further in view of Kinczel and Thornton?

Claim 3 is rejected under 35 USC 103(a) over Verschueren in view of Whitman and further in view of Kinczel and Thornton.

Both Kinczel (col. 7, line 55 - col. 8, line 16) and Thornton (col. 3, line 67 - col. 4, line 2) are cited to show electrostatic coating processes for light-scattering layers.

Kinczel describes in the referenced passage the structure of the high-pressure mercury vapor gas discharge lamp of Fig. 5, including a luminescent coating 2 consisting of one or two layers, which can be prepared by electrostatic methods. There is no mention of a light-scattering layer, or that the layer or layers of coating 2 have light-scattering properties. Moreover, there is no mention of an electrostatic coating process for a light-scattering layer.

Thornton also describes a high-pressure mercury vapor lamp, with phosphor materials coated as a layer 34, using a liquid coating technique or a dry electrostatic precipitation technique. Thornton also mentions, with reference to Fig. 3, a layer 42 of a light-scattering material to scatter UV radiation which escapes absorption by the phosphor particles, back to the phosphor layer (34) to energize the phosphor particles. See col. 4, lines 18-25. Significantly, however, there is no mention of any coating technique for layer 34 (col. 4, lines

18-25).

Since Thornton's light-scattering layer functions to increase energization of the phosphor layer, and Verschueren's lamp lacks any such phosphor layer, Thornton's teachings would not suggest the addition of a light-scattering layer to Verschueren's lamp.

In summary, none of the cited references, whether taken alone or in any combination, contain any teaching or suggestion which would lead the skilled artisan to provide a discharge lamp with an electrostatic light-scattering coating on an outer tubular shaped bulb, as called for by claim 3.

Accordingly, it is urged that the rejection is in error and should be reversed.

3. Is claim 4 unpatentable over Verschueren in view of Whitman and further in view of Carleton?

Claim 4 is rejected under 35 USC 103(a) over Verschueren in view of Whitman and further in view of Carleton.

Carleton (col. 1, lines 24-30) is cited to show that the outer bulb of a high-pressure discharge lamp is internally provided with a light-scattering layer.

However, Carleton teaches that such a light-scattering layer has disadvantages, and provides a lamp with a clear outer envelope to overcome these disadvantages. See, e.g., col. 2, lines 8-10.

Thus, not only does Carleton fail to suggest the use of a light-scattering layer on the outer bulb, Carleton actually leads the skilled artisan away from such a light-scattering layer.

One of the reasons Carleton gives for avoiding such a

light-scattering layer is that it necessitates an ovoidal or similar-shaped envelope, in order to maintain an acceptable operating temperature. See col. 1, lines 57-61.

Thus, Carleton teaches that light-scattering layers cannot be employed on outer envelopes having shapes other than ovoidal or similar shapes. Consequently, Carleton at least strongly suggests that light-scattering layers cannot be used on tubular outer envelopes like those of Verschueren and Appellant.

In contrast, Appellant's claims specifically call for a tubular-shaped outer envelope. As pointed out in Appellant's specification, although this leads to a higher thermal load on the coating, it has been found that this has no adverse effects on the service life of the lamp. See page 2, lines 6-8.

Whitman relates to incandescent lamps and parabolic reflectors for such lamps, and thus is not relevant to the field of high-pressure discharge lamps.

Thus, the combination of Verschueren, Whitman and Carleton under Section 103(a) fails to teach or suggest a lamp with an outer envelope of a tubular shape and an internal light-scattering layer, as called for by claim 4. Accordingly, it is urged that the rejection is in error and should be reversed.

CONCLUSION

In conclusion, the cited references, whether taken alone or in combination, fail to teach or suggest a high-pressure discharge lamp with an outer envelope of a tubular shape and a light-scattering layer. Verschueren teaches a high-pressure discharge lamp with a tubular outer envelope, but without any light-scattering layer. Whitman relates to incandescent lamps in parabolic reflectors. Carleton relates to high-pressure

discharge lamps, but teaches that a light-scattering layer can only be used with ovoidal or similar-shaped outer bulbs, in order to maintain acceptable operating temperatures, and that such a layer is disadvantageous for other reasons as well. Carleton specifically rejects the use of a light-scattering layer in favor of a clear outer bulb.

Appellant's invention is thus not obvious in view of the various combinations of references provided in the rejections. Moreover, Appellant's invention is particularly unexpected and surprising in view of Carleton, since Appellant combines a tubular-shaped outer bulb and a light-scattering layer, without incurring an unacceptable thermal load.

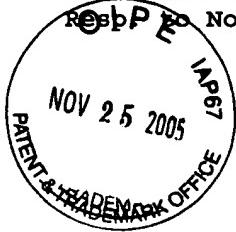
In view of the foregoing, Appellant respectfully requests that the Board reverse the rejections of record.

Respectfully submitted,



Frank J. Keegan 11/22/05
Attorney
914-333-9669

Response to Notification of Non-Compliant Appeal Brief of Oct. 27, 2005



APPENDIX

CLAIMS ON APPEAL

1. A high-pressure discharge lamp comprising a discharge vessel which is enveloped with clearance by an outer bulb provided with a lamp cap, which outer bulb is translucent, is substantially tubular in shape, and is provided with a light-scattering layer.
3. A lamp as claimed in claim 1, characterized in that the light-scattering layer forms an electrostatic coating.
4. A lamp as claimed in claim 1, characterized in that the outer bulb is internally provided with the light-scattering layer.

APPENDIX

EVIDENCE

No Evidence Appendix is submitted.

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APPENDIX

RELATED PROCEEDINGS

Copy of Decision on Appeal, Appeal no. 2004-0699, Application no. 09/873,564, mailed March 15, 2004 is attached.

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARK JOSEPHUS LUCIEN MARIA VAN DOMMELEN
and PAULUS ALBERTUS MARIA VERMEULEN

MAILED

Appeal No. 2004-0699
Application 09/873,564

MAR 15 2004

ON BRIEF

PAT. & T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

04 MAR 17 2004: 42

Before PAK, WARREN, and OWENS, Administrative Patent Judges.
OWENS, Administrative Patent Judge.

DECISION ON APPEAL

This appeal is from the final rejection of claims 1 and 3, which are all of the claims pending in the application.

THE INVENTION

The appellants claim a high-pressure discharge lamp having an outer bulb which is substantially tubular in shape and is provided with a light-scattering layer. Claim 1 is illustrative:

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1. A high-pressure discharge lamp comprising a discharge vessel which is enveloped with clearance by an outer bulb provided with a lamp cap, which outer bulb is translucent, is substantially tubular in shape, and is provided with a light-scattering layer.

THE REFERENCES

Thornton	4,315,193	Feb. 9, 1982
Verschueren	5,612,585	Mar. 18, 1997

THE REJECTION

Claims 1 and 3 stand rejected under 35 U.S.C. § 103 as being unpatentable over Verschueren in view of Thornton.

OPINION

We reverse the aforementioned rejection. We need to address the sole independent claim, i.e., claim 1.

Verschueren discloses a high-pressure discharge lamp (col. 1, line 6) comprising a discharge vessel (3) which is enveloped, with clearance, by a translucent, substantially tubular outer bulb (1) having a lamp cap (2) (col. 2, lines 54-58; figure 1). Verschueren does not disclose providing the outer bulb with a light-scattering layer.

Thornton discloses a high-pressure mercury vapor lamp having an operating arc tube which emits radiation comprising very strong green and yellow emissions, strong violet emission, and short and long wavelength ultraviolet emissions (col. 1,

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lines 47-48; col. 1, line 65 - col. 2, line 2). The inner surface of the outer bulb is coated with a phosphor which is responsive to the ultraviolet radiations generated by the operating arc and provides visible emissions (col. 2, lines 3-9). A light-scattering material such as silica can be coated onto the inner surface of the outer bulb prior to applying the phosphor coating so that ultraviolet radiations which have escaped absorption by the phosphor layer are scattered back to the phosphor by the light-scattering layer, thereby energizing the phosphor (col. 4, lines 18-25).

The examiner argues that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a light-scattering layer on the outer bulb as taught by Thornton in the discharge lamp assembly of Verschueren for the purpose of improving color rendition of the discharge lamp (cited by Thornton column 4, lines 26-62)" (answer, pages 3-4).

As pointed out above, Thornton's light-scattering layer improves color rendition by scattering light back to a phosphor layer. Verschueren's outer bulb, however, does not have a phosphor layer. The examiner has not explained how 1) Thornton

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would have indicated to one of ordinary skill in the art that Thornton's light-scattering layer could improve the color rendition of Verschueren's discharge lamp without Verschueren's outer bulb having a phosphor layer, or 2) the applied references would have fairly suggested, to one of ordinary skill in the art, applying both of Thornton's light-scattering layer and phosphor layer to Verschueren's outer bulb.

The examiner, therefore, has not carried the burden of establishing a *prima facie* case of obviousness of the appellants' claimed invention.

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DECISION

The rejection of claims 1 and 3 under 35 U.S.C. § 103 over Verschueren in view of Thornton is reversed.

REVERSED

CHUNG K. PAK
Administrative Patent Judge

CHARLES F. WARREN
Administrative Patent Judge

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BOARD OF PATENT
APPEALS AND
INTERFERENCES

TERRY J. OWENS
Administrative Patent Judge

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Appeal No. 2004-1699
Application 09/873,564

Philips Intellectual Property & Standards
P.O. Box 3001
Briarcliff Manor, NY 10510



H.A

**Notification of Non-Compliant Appeal Brief
(37 CFR 41.37)**

	Application No. 09/873,564	Applicant(s) VAN DOMMELLEN ET AL.
	Examiner Dameon E. Levi	Art Unit 2841

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The Appeal Brief filed on 18 September 2005 is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file an amended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer. **EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.**

1. The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.
2. The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).
3. At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).
4. (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).
5. The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi))
6. The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).
7. The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).
8. The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner and relied upon by appellant in the appeal, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).
9. The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).
10. Other (including any explanation in support of the above items):

The Evidence Appendix, and the Related Proceedings Appendix pursuant to 37 CFR 41.37(c) are missing in the Brief.

HAN AND CHENG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

VAN DOMMELEN, Mark J. et al.

Serial No. 09/873,564

Filed: April 4, 2001

Title: HIGH PRESSURE DISCHARGE LAMP

Mail Stop Appeal Brief - Patents
Honorable Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Response to Notification of
Non-Compliant Appeal Brief

Sir:

In response to the Notification of Non-Compliant Appeal Brief (37 CFR 41.37) mailed October 27, 2005, Appellant(s) submit the attached Corrected Appeal Brief.

Please charge any fee deficiencies and credit any overpayments to Deposit Account No. 14-1270.

Respectfully submitted,

By Frank Keegan
Frank Keegan, Reg. 50,145
Attorney
(914) 333-9669
November 22, 2005

Encl.: Appellant's Corrected Appeal Brief
Copy of Notification of Non-Compliant Appeal Brief

CERTIFICATE OF MAILING

It is hereby certified that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to:

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On November 23, 2005
(Date of Mailing)

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(Signature)

AF
Jfw